Heat Exhaustion

NPS

General Information

Heat exhaustion includes several clinical disorders having symptoms which may resemble the early symptoms of heat stroke. Heat exhaustion is a serious heat illness, and if left untreated may progress to heatstroke. Heat exhaustion is caused by the loss of large amounts of fluid by sweating, sometimes with excessive loss of salt.

Symptoms

A worker suffering from heat exhaustion still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. In more serious cases, the victim may vomit or lose consciousness. The skin is clammy and moist, the complexion is pale or flushed, and the body temperature is normal or only slightly elevated.

Preventative Measures

- Always have an adequate supply of water available and ensure that everyone is getting needed liquids.
- Schedule the hardest work during the cooler hours of the day.
- Set a moderate work pace.
- As the temperature increases, stop frequently for rest periods of at least 15 minutes. Relax in a cool or shady location, if possible.
- Prevent sunburn by keeping as much of your body covered as possible. Roll down your sleeves, button your collar and turn it up around your neck, and keep your head covered.
- Use sunblock on any area of your body that is not covered with clothing. Sunblock/sunscreen/suntan lotion partly blocks UV rays. Most products contain an SPF rating that describes the amount of protection given. This protection factor, however, applies only to UVB rays responsible for sunburn and not to UVA rays that penetrate more deeply into the skin and may also be responsible for causing cancer and wrinkles.
  - What to look for in sunscreen:
    - UVB protection: Padimate O, Homosalate, Octisalate (octyl salicylate), Octinoxate (octyl methoxycinnamate)
    - UVA protection: Avobenzone
    - UVA/UVB protection: Octocrylene, titanium dioxide, zinc oxide, Mexoryl ecamsule)
- Light-colored or white clothing is best to prevent overheating because it reflects light rays (heat energy), whereas black or dark-colored clothing absorbs it. However, darkcolored clothing provides more sun protection than light colors by preventing more UV rays from reaching your skin. On sunny days where temperatures are not excessively high, dark clothing may be preferred. On sunny days with high temperatures, sun protective clothing may be the best option. Clothing with a "UPF rating" describes the protection given against both UVA and UVB. Where sun protective clothing is not an option, one should apply sunscreen underneath light-colored clothing to further protect against UV rays.
- Keep your clothing loose and flapping; squirt water on your clothing to induce evaporative cooling.
- Do not disrobe when hot; by removing your clothing, your perspiration will evaporate more rapidly, and you will lose its cooling effects. Rapid evaporation of perspiration speeds up the process of dehydration.

Treatment

In most cases, treatment involves having the victim rest in a cool, shaded place while drinking cool (not iced) water, or a sports drink containing electrolytes. Victims with mild cases of heat exhaustion usually recover quickly with this treatment, however, with more severe cases it may be necessary to lie the person down and elevate the legs and feet slightly or spray them with cool water and fan them. Those with severe cases may require extended care for several days. There are no known permanent effects.